

Date: Wednesday, 06/05/2009 2:10:32 PM  
 User: Melanie Fauteux

## Process Sheet

Customer : CC-DAR01 Dart Aerospace Ltd. Drawing Name : WINDOW SUBSTITUTION KIT  
 Job Number : 47766  
 Estimate Number : 10804  
 P.O. Number :  
 This Issue : 06/05/2009 S.O. No. :  
 Prsht Rev. : NC  
 First Issue : / / Type :  
 Previous Run : 00015  
 Part Number : DSI 9462011  
 Drawing Number : DSI 9462011 **PRELIM A**  
 Project Number :  
 Drawing Revision :  
 Material :  
 Due Date : 06/05/2009 Qty: 4 Um: Each  
 Written By :  
 Checked & Approved By : **MF 09-05-06**  
 Comment :

## Additional Product

**PRELIMINARY ISSUE** 09.05.06

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

CHG 001



Page work set by E-mail

09/05/06

2.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1



3.0 D3136043 Window Assembly



Comment: Qty.: 1.0000 Each(s)/Unit Total: 4.0000 Each(s)

Window Assembly

B 45168

09/05/06 (4)

4.0 D32241 Frame



Comment: Qty.: 1.0000 Each(s)/Unit Total: 4.0000 Each(s)

Frame

44164 47759

09/05/06 (4)

5.0 D323710880 Seal



Comment: Qty.: 1.0000 Each(s)/Unit Total: 4.0000 Each(s)

Seal

43140 43183

09/05/06 (4)

6.0 D323730480 Seal Filler



Comment: Qty.: 1.0000 f(s)/Unit Total: 4.0000 f(s)

Seal Filler

43183 43140

09/05/06 (4)

## Process Sheet

Customer: CC-DAR01 Dart Aerospace Ltd.

Drawing Name: WINDOW SUBSTITUTION KIT

Job Number: 47766

Part Number: DSI 9462011

Job Number:



Seq. #:

Machine Or Operation:

Description :

7.0

D35611

Seal Insert Tool



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Seal Insert Tool

345778

88 09/05/06

8.0

AN5261032R9

Screw



Comment: Qty.: 12.0000 Each(s)/Unit Total : 48.0000 Each(s)

Screw

110584

88 09/05/06

9.0

AN960JD10L

Washer



Comment: Qty.: 12.0000 Each(s)/Unit Total : 48.0000 Each(s)

Washer

M69632

88 09/05/06

10.0

MS21042L3

Nut



Comment: Qty.: 12.0000 Each(s)/Unit Total : 48.0000 Each(s)

Nut

M110844

88 09/05/06

11.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

ENGINEERING  
APPROVAL

09/05/06

12.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

09/05/13

Job Completion



POSITIVE RECALL

EFFECTIVE

RELEASED

AUTH

DATE

09.05.15

09-05-06

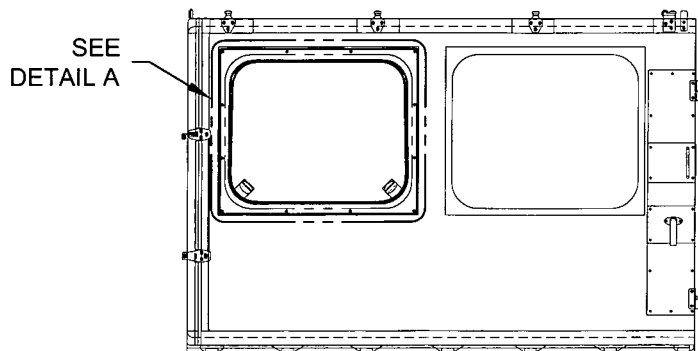
(continued from Sheet 1)

- 1.2.8 Apply 0.010 to 0.015 inches of RTV-732 sealant to both sides of the narrow seal insert groove (see Figure 2).
- 1.2.9 Apply 0.010 to 0.015 inches of RTV-732 sealant to areas of the window frame that have been prepared for bonding with Dow 1200 primer per 3.2.5.
- NOTE:** It is prohibited to bond lower corners as shown in Figure 2.
- 1.2.10 Do not put any adhesive in the seal groove that accepts the window. Note that the seal insert groove faces outboard (see Figure 2).
- 1.2.11 Install D3237-1-0980 seal in the frame. Trim as required. Masking tape may be used temporarily to hold the seal in place for the next step.
- 1.2.12 Place the window in the seal groove and work seal lip around the periphery of the window.
- 1.2.13 Install D3237-3-0980 into D3237-1-0980 using D3561-1 Window Seal Tool (or equivalent). Trim seal as required. Work the seal insert around until it fits properly.
- 1.2.14 Remove all masking tape and allow sealant to cure for a minimum of 24 hours at 75°F (24°C).
- 1.2.15 Each modified emergency exit should be marked. Paint a contrasting color band 2.0" wide per FAR 29.811 (see Figure 2) if it has not already been done.

## 2.0 PARTS LIST

Qty -011	Part No.	Description
X	DSI 9462-011	WINDOW SUBSTITUTION KIT
1	D3136-043	WINDOW ASSEMBLY
1	D3224- <del>FS</del>	FRAME
1	D3237-1-0980	SEAL RETAINER
1	D3237-3	SEAL FILLER
1	D3561-1	WINDOW SEAL TOOL
12	AN5261032R9	SCREW
12	AN960JD10L	WASHER
12	MS21042L3	NUT (OR MS21042-3)

4X



**PRELIMINARY ISSUE**

09.05.06

**REFERENCE ONLY**

**FIGURE 1: D412-694-01 DOOR ASSY (SHOWN)  
D412-694-02 DOOR ASSY (OPPOSITE)  
VIEW LOOKING OUTBOARD, NOT TO SCALE**

47766

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

**APPROVED**

BY: \_\_\_\_\_  
D. SHEPHERD (DE # 02)

DATE: 09.05.06  
CERT. NO.: SH05-10  
ISSUE NO.: 1

DESIGN		<b>DART AEROSPACE LTD</b> <b>HAWKESBURY, ONTARIO, CANADA</b>	
DRAWN			
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9462	SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		WINDOW SUBSTITUTION	NTS
DATE	09.05.06	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

# DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D412-694 REV. B

REF CANADIAN STC: SH05-10

REF FAA STC: SR02086NY

REF EASA STC: EASA.IM.R.S.01085

It is acceptable to substitute the existing windows (P/N's D3136-041, D3117-1-0980 and D3117-3-0980) on D412-694-01/-02 Door Assembly with DSI 9462-011 Window Substitution Kit. The DSI 9462-011 Kit is defined under Section 2.0 of these instructions. A single kit is required per window.

## 1.0 INSTALLATION PROCEDURE

### 1.1 INSTALLATION OF FRAME

Referring to Detail A, install the D3224-3 Frame as follows:

- 1.1.1 Remove existing window per Section 52.4 of ICA-D412-694.
- 1.1.2 Locate/center D3224-3 Frame into door inside window frame and transfer drill pilot holes ( $\varnothing 0.098"$ ) from frame to door. If required, trim frame to eliminate any interference. Ensure distance from center of pilot holes to edge of composite door is a minimum of 0.400".  
**NOTE:** Opening for window is not perfectly square. Orient frame so that the narrow side of the window is on top.
- 1.1.3 Enlarge holes in door and frame to  $\varnothing 0.201"$  (#7 drill). Deburr.
- 1.1.4 Touch up frame with alodine 1200 per MIL-C-5541 after drilling and trimming.
- 1.1.5 Using Mylar or similar tape, carefully mask off an area of 0.43 inches (7/16) wide around the window opening of D3224-3 Frame (refer to Figure 2). Prime and paint frame to match aircraft finish per the Aircraft Maintenance Manual.
- 1.1.6 Apply Proseal 890 on the surface of the door where the D3224-3 Frame will be installed (see Section B-B). Fasten the D3224-3 Frame to the door using provided hardware.
- 1.1.7 Install D3136-043 Window Assembly, D3237-1-0980 Seal Retainer, and D3237-3-0980 Seal Filler per Section 1.2 of these instructions.

### 1.2 INSTALLATION OF PUSH OUT WINDOWS





Referring to Detail A and Figure 2, install the D3136-043 Window Assembly, D3237-1-0980 Seal Retainer, and D3237-3-0980 Seal Filler as follows:

- 1.2.1 Using Mylar or similar tape, carefully mask off the frame leaving an area 0.43 inches (7/16) wide to be bonded to avoid getting adhesive or primer onto surrounding areas that will be later primed and painted. Paint and primer will not adhere to surfaces where silicone and/or adhesive have been applied.
- 1.2.2 Remove all adhesive and/or finish from unmasked portion of window frame using stiff fiber brush and aliphatic naphtha. 360 grit abrasive paper may be used to remove any primer from the unmasked area of the window frame. Finish must be removed from the seal bonding area of the frame.
- 1.2.3 Inspect the edge of the frame for scratches, cracks, or other damage.
- 1.2.4 Clean all residue from the window frame with MEK (Methyl Ethyl Ketone) and dry with a clean white cloth.
- 1.2.5 Apply Dow 1200 primer to area to be bonded using a small brush. Allow primer to dry between 20 minutes and one hour before bonding window seal into place.
- 1.2.6 Prepare D3237-1-0980 Seal Retainer for bonding by abrading the narrow seal insert groove with 80-grit abrasive paper (see Figure 2).

(continued on Sheet 2)

47766

CANADA DEPARTMENT OF TRANSPORT AIRCRAFT CERTIFICATION BRANCH DAO # 01-O-01	
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BY:	D. SHEPHERD (DE # 02)
DATE:	09.05.06
CERT. NO.:	SH05-10
ISSUE NO.:	1

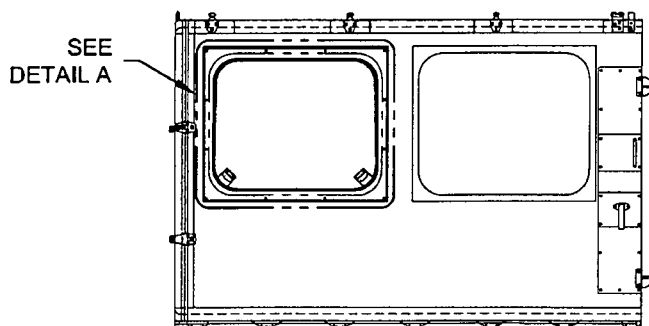
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REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN		DRAWING NO. REV. A	
CHECKED	PH	DSI 9462 SHEET 1 OF 4	
MFG. APPR.	N/A	TITLE SCALE	
APPROVED		WINDOW SUBSTITUTION NTS	
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DATE	09.05.06		

(continued from Sheet 1)

- 1.2.7 Clean all residue from the seal groove with a cloth dampened with MEK. Wipe dry with a clean cloth.  
**NOTE:** Seal ends should meet at the 6 o'clock position. Seal insert ends should meet at the 12 o'clock position.
- 1.2.8 Apply 0.010 to 0.015 inches of RTV-732 sealant to both sides of the narrow seal insert groove (see Figure 2).
- 1.2.9 Apply 0.010 to 0.015 inches of RTV-732 sealant to areas of the window frame that have been prepared for bonding with Dow 1200 primer per 1.2.5.  
**NOTE:** It is prohibited to bond lower corners as shown in Figure 2.
- 1.2.10 Do not put any adhesive in the seal groove that accepts the window. Note that the seal insert groove faces outboard (see Figure 2).
- 1.2.11 Install D3237-1-0980 seal in the frame. Trim as required. Masking tape may be used temporarily to hold the seal in place for the next step.
- 1.2.12 Place the window in the seal groove and work seal lip around the periphery of the window.
- 1.2.13 Install D3237-3-0980 into D3237-1-0980 using D3561-1 Window Seal Tool (or equivalent). Trim seal as required. Work the seal insert around until it fits properly.
- 1.2.14 Remove all masking tape and allow sealant to cure for a minimum of 24 hours at 75°F (24°C).

## 2.0 PARTS LIST

Qty -011	Part No.	Description
X	DSI 9462-011	WINDOW SUBSTITUTION KIT
1	D3136-043	WINDOW ASSEMBLY
1	D3224-3	FRAME
1	D3237-1-0980	SEAL RETAINER
1	D3237-3-0980	SEAL FILLER
1	D3561-1	WINDOW SEAL TOOL
12	AN5261032R9	SCREW
12	AN960JD 10L	WASHER
12	MS21042L3	NUT (OR MS21042-3)








**FIGURE 1: D412-694-01 DOOR ASSY (SHOWN)**  
**D412-694-02 DOOR ASSY (OPPOSITE)**  
VIEW LOOKING OUTBOARD, NOT TO SCALE

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED

BY: *[Signature]*  
D. SHEPHERD (DE # 02)

DATE: 09.05.06  
CERT. NO.: SH05-10  
ISSUE NO.: 1

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9462	SHEET 2 OF 4
APPROVED		TITLE	SCALE
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APPLY A THIN LAYER  
OF PROSEAL 890  
BETWEEN FRAME AND  
DOOR, TYP ALL AROUND

AN960JD10L WASHER  
MS21042L3 NUT

D3224-3 FRAME  
REF

DOOR  
REF

OUTBOARD  
→

AN5261032R9  
SCREW

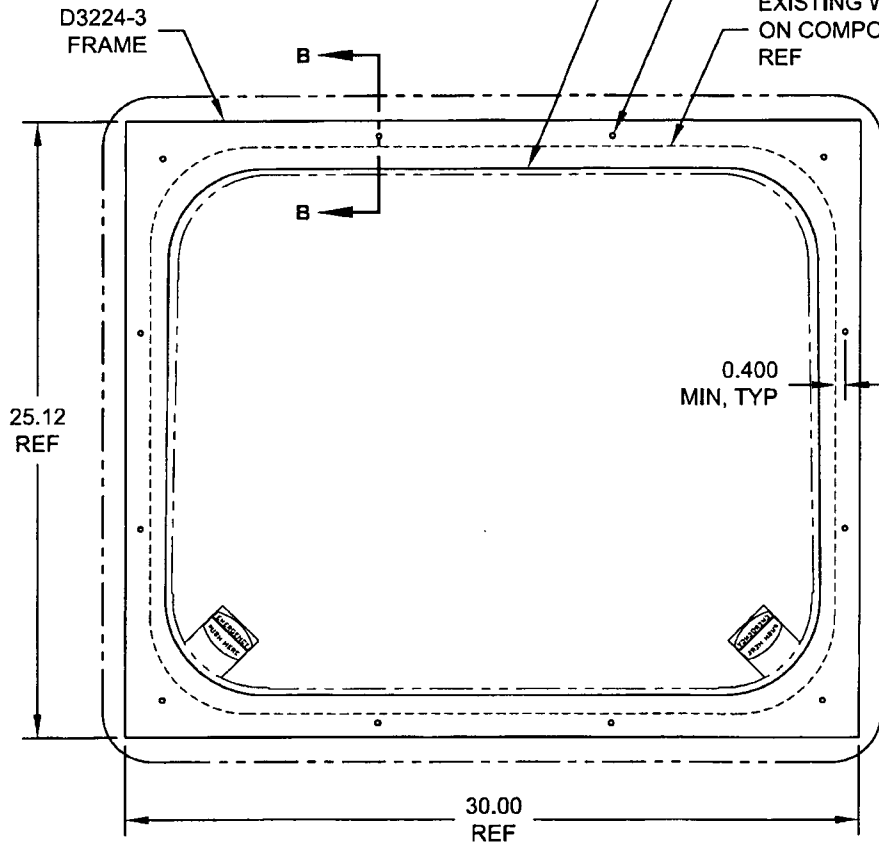
### SECTION B-B: FASTENER ARRANGEMENT

12 PL, NOT TO SCALE

D3136-043 WINDOW ASSEMBLY  
REF

TRANSFER DRILL PILOT HOLES  
ON FRAME TO DOOR AND  
ENLARGE TO Ø0.201  
12 PL

EXISTING WINDOW OPENING  
ON COMPOSITE DOOR  
REF



### DETAIL A: INSTALLATION OF D3224-3 VIEW LOOKING OUTBOARD, NOT TO SCALE

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

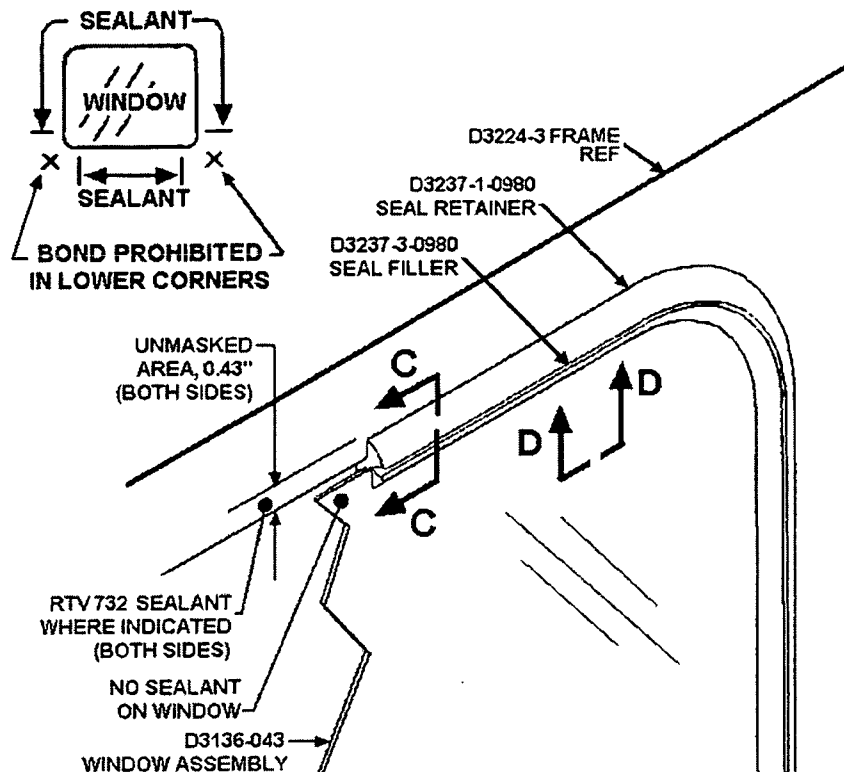
APPROVED

BY: *[Signature]*  
D. SHEPHERD (DE # 02)

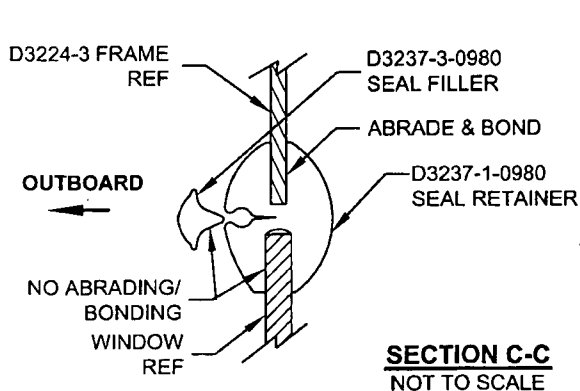
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MFG. APPR.	N/A	DSI 9462	SHEET 3 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	WINDOW SUBSTITUTION	NTS
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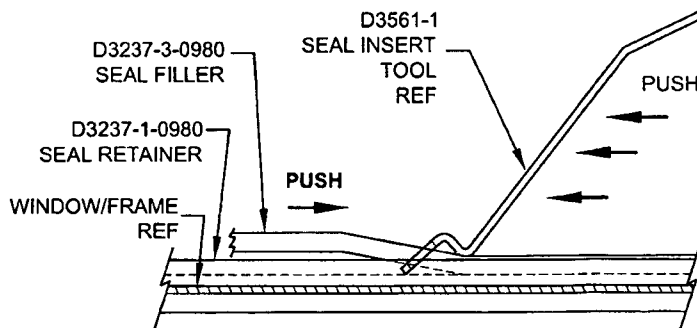
44766



**FIGURE 2: WINDOW/SEAL INSTALLATION**



**SECTION C-C  
NOT TO SCALE**








**SECTION D-D  
NOT TO SCALE**

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DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

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